CAZA ANIMAL CARE AND HOUSING MANUAL

Contents

CAZA documents consist of a combination of guidelines, which are optional and standards that are mandatory. Those elements of this document that are standards are highlighted in a text box.

ANIMAL FACILITIES

1. Building materials and substrate to which animals have access must be:

1.1. non-toxic *(explanation : in the method in which it is used, the material does not represent a toxic hazard to the animal species to which it is exposed)*

1.2. in good repair and of a texture and design which does not predispose the animals to abrasion, laceration or other injury considering the behaviour and physical characteristics of the animal

2. The environment in which the animals live must:

2.1. be wholesome in terms of providing adequate ventilation/aeration with clean, acceptably toxin - free air for respiration

2.2. Not adversely affect the animals considering its auditory, olfactory and light or visual sensitivities.

2.3. Provide appropriate quality of water for those species that are marine in nature

3. Where artificial environmental systems must be maintained to support the animals, these systems must be monitored either mechanically or manually to enable repair or substitution with alternate systems thereby preventing distress, injury or death of the specimen.

4. Animal enclosures in which animals are on public display must be of a size which enables the animal to:

4.1.1. Exercise natural behaviours to facilitate public education and interpretation. *(Consideration should be given to the recommended enclosure standards designated under the current government regulations and established guidelines of professional groups)*

4.1.2. Achieve a distance from the public and other specimen at which the animals are not psychologically or physically stressed.

4.1.3. Achieve the full range of body motion and physical movements normally performed. (*Animals may be physically altered to preclude certain physical activities (e.g. pinioning) only as a last resort and only if an environment can be provided in which the limitations of the altered state do not create predictable physical or psychological discomfort).*

4.2. Contain “furniture” or procedures to physically and psychologically enrich the environment and stimulate normal physical movement and behaviour of the specimen.

4.3. Contain natural or fabricated shelters enabling animals to protect themselves from natural conditions (e.g. sun, rain, snow).

5. Long-term or permanent animal enclosures for animals off public display must:
5.1. Be of a size that enables the animal to achieve a distance from the staff or other animals at which the animals are not psychologically stressed and to achieve the full range of body movements and physical movements normally performed.
5.2. Be provided with “furniture” and/or procedures to physically and psychologically enrich their environment and stimulate normal physical movement and behaviour.
5.3. Contain natural or fabricated shelters enabling animals to protect themselves from natural conditions (e.g. sun, rain, snow).

6. Temporary Animal Housing must
6.1. Be of a size and design which minimizes the likelihood of physical and psychological trauma of the specimen while providing fundamental physical needs.
6.2. Be utilized only in emergencies or during animal movement. Provisions should be underway to move any animal in temporary housing to adequate long - term enclosures.
6.3. Contain natural or fabricated shelters enabling animals to protect themselves from natural conditions (e.g. sun, rain, snow).

7. Housing and care of animals to be used for feed must be in accordance with established standards outlined in the Canadian Council on Animal Care, Guide to the care and use of experimental animals, Vol. 1 & 2.

8. Containers used for the transport of animals on airlines must conform to or exceed the current International Air Transport Association (IATA) Live Animals Regulations. Other forms of transport must be suitable to the animals and their specific needs.

GENERAL OPERATIONS

9. Buildings and substrate to which animals have access must be kept clean:

9.1. washable surfaces should be washed clean and disinfected as required to prevent potentially dangerous accumulations of organic and inorganic materials and organisms
9.2. Substrate that cannot be washed should be cleaned of gross waste and dangerous contaminants and replaced as required to maintain a wholesome environment.

10. Animal identification and records must provide information to enable current and retrospective investigation of genealogy, life history and medical events:

    10.1. Animals readily identifiable should be identified individually by number and records maintained based upon this identification.
    10.2. Animal records should include the date of acquisition, disposition, genealogy and/or source, record of movement of the animal within & outside the institution, significant life events, reproductive history, medical history and necropsies.
    10.3. Records should be maintained based on “animal groups” when animals cannot be reasonably or safely identified on an individual basis.
    10.4. records should be protected from fire and other predictable events which may result in loss or destruction (i.e. duplication and off-site storage)

11. All animal care staff must be monitored throughout the working day and confirm their departure upon leaving the institution.

12. Animal waste must be used or disposed of in a manner that complies with all applicable regulations.

13. Sewage disposal from all facilities must comply with all applicable regulations.

14. Toxic or hazardous waste must be handled according to occupational and public health regulations.

15. The institution must have access to applicable regulation concerning:
    15.1. fire prevention and control
    15.2. humane animal regulations
    15.3. International Air Transport Association (IATA) regulations
    15.4. CAZA standards, policies and Code of Ethics
    15.5. Veterinary Act
    15.6. Canadian Food Inspection Agency regulations (as applicable)
    15.7. Department of Fisheries and Oceans regulation (as applicable)
    15.8. zoo regulations (as applicable)

16. Established policies and position statements of CAZA must be on file in the institution and the management and staff must have a working knowledge of these policies.
17. Pest control programs must be operated in such a way that the animal collection, the staff and the public is not threatened by pests or contamination from pests.

EMERGENCY PREPARATION

18. Plans to respond to predictable emergency scenarios must be clearly defined in writing and all staff must be aware of their responsibilities and the overall objectives.

19. All animal housing structures in which there is electrical service, an artificial source of temperature control, fuel service, or to which the public has access must have at least one appropriate class fire extinguisher as designated by local regulation

20. All fire extinguishers must be charged and inspected at least annually and personnel trained in their usage as required by local regulation.

21. Firearms must be maintained in operational condition, stored in a locked area when not in use and under conditions which comply with relevant regulation.

22. Access to firearms must be restricted to those personnel certified in their use

23. Personnel, who are responsible for the use of firearms in emergency response protocols, must be aware of their responsibilities and the proper procedures as designated in the written protocol.

24. Animal enclosures & housing should be constructed in locations and to standards that will minimize the risk of animal injury or escape in the event of predictable environmental or other threats.

25. Written Emergency Response Plans for situations including but not limited to the following must be in place. These plans must be reviewed and updated at least annually and all personnel involved in such procedures must be aware of the plans and their responsibilities in the event of an emergency.

25.1. Animal Escape
25.2. Fire
25.3. Flood/Storm
25.4. Human exposure to animal venom or poison (where applicable)
25.5. Human injury or distress (public, staff, volunteer)
25.6. Utility failure (where applicable)
25.7. Public in animal enclosure
25.8. Lost Child or adult

EQUIPMENT AND CHEMICALS

26. Equipment and machinery must be in good repair and safe to operate.

27. Provisions must be available to sanitize equipment that may be used in more than one animal enclosure.

28. Where an item of machinery or equipment is critical to the maintenance of animal specimens, contingency plans must be in place in the event of dysfunction or loss of that item.

29. Chemicals used or stored on the property of the institution must be properly identified by label.

30. All chemical labelling and Material Safety Data Information must be in accordance with applicable regulation.

31. Containers of chemicals must provide for the safe storage of the material.

32. Containers of chemicals must be stored or maintained in appropriate areas and under appropriate security to minimize the opportunity of spillage or accidental human or animal exposure.

SECURITY

33. Security must be provided to safeguard the animal collection and the public.

34. A complete barrier, natural or fabricated perimeter fence, must exist around the animal enclosures, which protects the animal collection from direct exposure to the non-visiting public and exposure to feral or domestic animals. The level of security required will vary according to the species in the collection and the proximity of the institution to populated areas, to agricultural land and to sensitive wildlife habitat. (Recommended minimum barrier should be the equivalent of a 2 meter high, chain link fence) The perimeter fence should be independent of any animal exhibit.

35. Adequate barriers must be in place to enable containment of an escaped animal within the property.

36. Some method of remote or manual monitoring of the security of the institution when not open to the public must be in place.

37. Public must be prevented from directly contacting potentially dangerous animals by use of double fencing or other barriers.

38. Animal food materials should be maintained in an area that is not accessible to the public.

STAFF

39. Personnel involved in the management and maintenance of the animals must have the physical ability, the knowledge, the access to information, the training and the equipment as necessary to:

    39.1. adequately and humanely maintain the animals under the conditions provided
    39.2. provide adequate nutrition
    39.3. provide environmental enrichment for the behavioural needs of the animal
    39.4. Respond appropriately to predictable emergency scenarios.

40. Training programs must be provided that enable staff to conduct their work duties safely and to respond appropriately to predictable emergencies according to written protocols. Training should include but not be limited to information regarding:

    40.1. animal husbandry
    40.2. emergency response procedures
    40.3. hazardous goods handling and management (where relevant)
    40.4. animal restraint
    40.5. hygiene and zoonoses

ANIMAL CARE

41. All animals or animal groups must be observed by animal keeping staff at least once daily and as often as required given the circumstances of the environment, animal condition and behaviour of the animal or group. (*Hibernation and periods of particular sensitivity such as those associated with reproductive activity of some species may preclude daily observation*)

42. Standard references, such as those at the end of these standards, regarding the husbandry of wild animals should be available.

ANIMAL NUTRITION

43. Appropriate reference material for the nutritional requirements and feeding practices of the animals in the collection must be available

44. Observation of feeding and records of feeding must be maintained on a daily basis.

45. Food materials must be wholesome.

45.1. Food materials should not be contaminated with organic, inorganic or chemical materials that may adversely affect the recipient animal.

45.2. Food materials should be stored:

45.2.1. In a manner which preserves the nutritional integrity of the material until fed.

45.2.2. So as to prevent contamination by organic, inorganic or chemical contaminants.

45.2.3. To prevent access by pest species.

46. Where essential feed components are required, they must be offered to the animal collection by the animal keeper:

46.1. Only feed that is provided by the institution may be fed by the public to animals that are clearly designated by the institution.

46.2. Public feeding of animals should be monitored by the staff and the volume of feed offered managed.

47. A potable source of water for animal maintenance must be available to all specimens.

47.1. Food and water should be offered in such a way that it is made accessible to each individual specimen.

VETERINARY CARE

48. Veterinary services must be provided for the animal collection that complies with the Guidelines for Zoo/Aquarium Veterinary Medicine Programs and Veterinary Hospitals (Journal of Zoo and Wildlife Medicine, 21 (3), 1990).

49. The veterinary program must include but not be limited to consultation regarding preventive health care of the collection and clinical veterinary services including 24-hour emergency service.

50. Equipment required for the restraint, treatment and handling of the animal collection

must be available.

51. Facilities must be available for the isolation and treatment of sick or injured animals and for the quarantine of newly arrived animals.

52. All pharmaceuticals on the premises must be maintained under conditions of temperature and security that comply with all regulations and meet pharmaceutical company recommendations.

53. All pharmaceuticals stored at the institution should be current.

54. Only licensed veterinarians are permitted to perform veterinary procedures in accordance with regulations of the provincial/territorial veterinary act.

55. The primary veterinary hospital or clinic serving the collection must comply with the criteria for animal hospitals established by the Provincial Veterinary Association.

56. Biomedical waste will be handled and disposed of in accordance with all relevant legislation.

RECOMMENDED REFERENCE LIST

The references that each institution acquires will depend upon the animal collection and programs in which the institution is active. The following list is not exhaustive; it is not prioritized and is intended only to assist in reference development

International Zoo Yearbook. The Zoological Society of London,
Regent's Park, London, UK. NW1 4RY
Annual publication

Wild Mammals in Captivity. Principles and Techniques. Kleiman,
D. G.,M. E. Allen, K. V. Thompson, S. Lumpkin, eds. 1996
The University of Chicago Press.. Chicago Il. 639 pp.
ISBN 0-226-44002-8

Walker's Mammals of the World. 6th ed. Nowak , Ronald M. ed.
1999. John Hopkins University Press. Baltimore . MD. 2015 pp.
ISBN 0-801805789-9

Captive Seawater Fishes : Science and Technology.
Spotte, S.1992. John Wiley & sons, Inc. New York , N.Y.942 pp.
ISBN 0-47154554-6

Dynamic Aquaria. Adey, W.H., and K. Loveland. 1991
Academic Press. New York, N.Y. 410 pp.
ISBN 0-12-043792-9

Marine Mammals Ashore. Geraci, J. R., V. J. Lounsbury. 1993.
Texas A & M Sea Grant publication, Galveston, TX. 305 pp.
ISBN 1-883550-01-7

CRC Handbook of Marine Mammal Medicine. 2nd ed.
Dierauf, L.A., F. M. D. Gulland. 2001. CRC Press. Boca Raton,
Fl. 1063 pp.
ISBN 0-8493-0839-9

Zoo and wild Animal Medicine. 5th ed. Fowler, M.E., Miller, R.E.
2003. W. B. Saunders, Toronto, ON, 782 pp

Reptile Medicine and Surgery. Mader, Douglas R. 1996.
W. B. Saunders, Toronto, ON. 512 pp.
ISBN 0-7216-5208-5

Amphibian Medicine and Captive Husbandry. Wright, Kevin M, Brent R. Whitaker. 2001. Krieger Publishing, Malabar, FL. 499 pp. ISBN 0-89464-917-5

Avian Medicine : Principles and Application. Ritchie, B.W., G. J. Harrison, L. R. Harison. 1994. Wingers Publishing, Lake Worth, FL. 1384 pp. ISBN 0-9636996-0-1

Veterinary Pharmacology and Therapeutics. 8th ed. Adams, Richard H.. 2001. Iowa State University Press. Ames, Iowa. 1201 pp. ISBN 0-813-8174-39

Exotic Animal Formulary. 2nd ed. Carpenter, James W., Ted Y. Mashima, David J. Rupiper. 2001. W. B. Saunders, Toronto, ON. 423 pp. ISBN 0-7216-8312-6